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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,172	02/11/2004	Chae-Ho Ko	P57024	1022
7590 Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005			EXAMINER NGUYEN, QUYNH H	
			ART UNIT 2614	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/775,172

Applicant(s)

KO ET AL.

Examiner

QUYNH H. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 34-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 34-36, claim the non-statutory subject matter of a computer readable medium having computer executable instructions. Applicant's specification states computer media embodies computer-readable medium having computer executable instructions, data structures, program modules or other data in a modulated signal such as the carrier waves, and computer readable media includes infrared microwaves... (paragraph [0291]). Claim 37 claims a data structure as embodied in computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1754 (claim to a data structure per se held nonstatutory). Therefore, since the claimed programs are not tangibly embodied in a physical medium and encoded on a computer-readable medium then the Applicants has not complied

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with 35 U.S.C 101.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Mukerjee (U.S. Patent 6,405,041).

As to claim 1, Mukerjee teaches a method for interconnecting wired and wireless phone services of a system for interconnecting wired and wireless phone services (Fig. 2) comprising:

registering at least one of a plurality of wired terminals (col. 4, lines 22-30) and public and private mobile communication terminals (public terminal 170 and private terminal 175) as extension subscribers and endowing the extension subscribers with each of wired phone numbers (col. 4, lines 22-49); and

when a wired phone number is called, making a call to the wired terminal corresponding to the wired phone number (col. 5, lines 4-7), and when there is the public and private mobile communication terminal to be simultaneously called with the wired phone number interconnectively, making a call to the corresponding public and private mobile communication terminal through a mobile communication network (col. 5, lines 3-22).

As to claim 2, Mukerjee teaches when a wired phone number is called, searching for a database and determining whether there is the public and private mobile communication terminal to be simultaneously called with the wired phone number interconnectively, and when there is, transferring a ring signal to the wired phone terminal and to the mobile terminal (col. 5, lines 3-22; col. 5, line 64 through col. 6, line 24).

As to claim 3, Mukerjee teaches transferring the ring signal to the mobile communication terminal through a base station which provides the mobile communication terminal with a wireless environment; and when there is no response from the mobile communication terminal through the mobile communication network for a predetermined time, transferring the ring signal to the mobile communication terminal through the public mobile communication network (col. 8, lines 12-19).

As to claim 4, Mukerjee teaches the database includes a wired phone number with which each wired terminal is endowed, a wired phone number with which each of the mobile communication terminals is endowed, and a phone number with which each of the mobile communication terminal is endowed through the mobile communication network (col. 2, lines 50-57; col. 4, lines 22-34).

As to claim 7, Mukerjee teaches the steps of: receiving an outgoing phone number and a mobile identifier number (MIN) of the public and private mobile communication terminal endowed from the public mobile communication network, from the public (Public Cellular Network) and private mobile communication terminal (Fig. 2, 161); determining whether a private mobile communication service is used (col. 4, lines

35-51; col. 5, lines 23-35); when the private mobile communication service is used transmitting the wire phone number with which the public and private mobile communication terminal is endowed using the caller identification (col. 5, lines 29-40).

As to claim 8, Mukerjee teaches when the public mobile communication service is used transmitting the mobile identifier number of the public and private mobile communication terminal which is received from the public and private mobile communication terminal using the caller identification (col. 5, lines 29-33).

5. Claims 23-36 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Neil et al. (US Patent 5,963,864).

As to claim 23, O'Neil teaches a method for interconnecting wired and wireless phone services of a system for interconnecting wired and wireless phone services (See title, abstract) comprising: when an external subscriber terminal makes a call to an arbitrary wired phone number through a public network, calling a first part of a wired and wireless interconnecting unit with a corresponding wired phone number through the public network (col. 15, lines 22-33) and determining whether the called phone number is a wired subscriber number (col. 15, lines 22-23; col. 16, lines 12-16 - *where O'Neil discussed Dough dials a directory number for wireline*); when the called phone number is the wired subscriber number (col. 15, lines 32-33), transferring the called phone number to a second part of the wired and wireless interconnecting unit through the wired subscriber circuit (col. 15, lines 27-33); and when the called phone number is not the wired subscriber number, distributing the virtual subscriber circuit to a wireless

terminal selected and transferred to the second part of the wired and wireless interconnecting unit (col. 6, lines 56-67; col. 17, lines 6-19).

As to claims 24-25 and 30, O'Neil teaches determining the wired and wireless interconnecting unit, whether the corresponding phone number in a database of the second part is a multiple terminating number, if not distributing the call to the wired subscriber (col. 16, lines 12-31 - *where O'Neil discussed check the database to determine whether the special services - multiple terminating number - are to be accorded to the communication, if not terminate the communication in a convention manner, for example, at the wired subscriber*).

As to claim 26, O'Neil teaches when the corresponding phone number is the multiple terminating number, distributing the call to the wired subscriber and then the wired and wireless interconnecting unit requests a virtual number and the virtual number for the corresponding wired phone number is provided and the call is distributed to the corresponding wireless terminal (col. 15, lines 10-46).

As to claims 27 and 31, O'Neil teaches when the wired subscriber is not available (col. 17, lines 8-9), selecting a virtual subscriber circuit distributed to the wireless terminal and transferring to the wire and wireless connecting apparatus (col. 17, lines 9-19); and distributing the call to the corresponding wireless terminal after selecting the virtual subscriber circuit distributed to the wireless terminal and transferring the circuit to the wireless terminal (col. 17, lines 13-19).

As to claims 28 and 32-33, O'Neil teaches when a subscriber terminal makes a call to an arbitrary wired phone number (col. 15, lines 10-13), receiving by the wired and

wireless interconnecting unit (col. 15, lines 4-15), the corresponding wired phone number and determines whether the called phone number is an incoming call number for an extension subscriber (col. 16, lines 12-26 - *where O'Neil discussed special services such as wireless telecommunication extension services are to be accorded to the communication*); when the called phone number is not the extension incoming call, performing a Tandem call and transferring the call (col. 16, lines 26-31 and col. 14, lines 34-58 - *where O'Neil discussed terminating the call in a conventional manner as in Fig. 1 or transfer via access tandem 32*); when the called phone number is an extension, determining whether the corresponding phone number is a wired phone number (col. 15, lines 4-18).

Claim 29 is rejected for the same reasons as discussed above with respect to claims 23-24 and 26. Furthermore, O'Neil teaches when the wired and wireless terminals respond in a mobile zone, processing the call according the response (col. 14, lines 10-18); when there does not exist the subscriber in the mobile zone, making by the wired and wireless interconnecting unit a call to a wireless terminal in a public mobile communication network (col. 18-33); determining whether there exists a subscriber in the mobile zone when there is no response, transmitting a voice information message to the wireless terminal in mobile zone (col. 18, lines 28-51).

As to claim 34, O'Neil teaches a computer readable medium having computer executable instructions for performing a method comprising: endowing each of a plurality of extension subscribers with wired phone numbers where at least one of a plurality of wired terminals and mobile communication terminals are extension

subscribers (col. 7, lines 25-35; col. 8, lines 43-48); making a call to the wired terminal corresponding to the wired phone number when a wired phone number is called (col. 15, lines 10-13); and making a call to the corresponding mobile communication terminal through a mobile communication network when there is the mobile communication terminal to be simultaneously called with the wired phone number interconnectively (col. 15, lines 22-29).

As to claim 35, O'Neil teaches when a wired phone number is called, determining whether there is the mobile communication terminal to be simultaneously called with the wired number interconnectively (col. 15, lines 22-32 - *Doug dial the wireline unit and be able to talk to both Carl at home and JoAnn on the road, hence it is determined that the mobile terminal is simultaneously called*).

As to claim 36, O'Neil teaches when there is the mobile communication terminal to be simultaneously called with the wired phone number as a result of the determination, transferring a ring signal to the wired and mobile terminal simultaneously (col. 15, lines 22-32).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukerjee (U.S. Patent 6,405,041) in view of Knoerle et al. (US Patent 6,694,004).

As to claim 5, Mukerjee teaches the database includes first identification information indicating whether a wired phone number is a number connected to a terminal or not (col. 2, lines 50-57).

Mukerjee does not explicitly teach a second identification information indicating whether the wired phone number uses a simultaneous terminating service, and a wired phone number of the mobile communication terminal which is called by the simultaneous terminating function.

Knoerle et al. teaches the database includes information indicating whether the wired phone number uses a simultaneous terminating service (col. 2, lines 18-44), and a wired phone number of the mobile communication terminal which is called by the simultaneous terminating function (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knoerle into the teachings of Mukerjee in order to have a more efficient system and identifying numbers associate with the simultaneous terminating function prior ringing the numbers.

As to claim 6, Knoerle et al. teaches when a phone number is called, determining whether the corresponding wired phone number is a wired subscriber terminal or not; and if not, making a call to the mobile communication terminal corresponding to the wired phone number through the mobile communication network (col. 4, line 65 through col. 5, line 30).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mukerjee (U.S. Patent 6,405,041) in view of Glass (2002/0168968).

As to claim 9, Mukerjee teaches making a call to the phone number using a wireless terminal (col. 5, lines 23-26); transferring the call generated by the wireless terminal to a wired and wireless interconnecting unit (Fig. 2, the unit including interface switch 161 and controller 165) (col. 5, lines 23-29); and determining whether the phone number of the call is an external outgoing number, the external outgoing number being outside of a mobile zone of the wireless terminal (col. 6, lines 61-67 - *where Mukerjee discussed determining whether the subscriber making the call is registered in the applicable coverage area, hence otherwise*).

Mukerjee does not teach changing by the wired and wireless interconnecting unit a caller identification of the call to a virtual wired number which a wireless terminal is endowed.

Glass teaches when receiving a request for an outgoing service from an internal mobile communication terminal 200, changes the caller identification to the virtual wired phone number assigned to the internal mobile communication terminal, and calls a called terminal via the PSTN 100 ([0016] - [0017]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Glass into the teachings of Mukerjee for the purpose of having a more efficient system and allowing the called party to see familiar telephone number, as discussed by Glass ([0005] - [0006]).

9. Claims 10-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukerjee and Glass and further in view of O'Neil et al. (US Patent 5,963,864).

As to claim 10, Mukerjee and Glass do not explicitly teach storing the call in a message and transferring to the wire and wireless interconnecting unit when the phone number is an external outgoing number.

O'Neil teaches storing the call in a message and transferring to the wire and wireless interconnecting unit when the phone number is an outgoing number (col. 14, lines 1-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of O'Neil into the teachings of Mukerjee and Glass for the purpose of having a more efficient system and permitting communications between a wireless network switch and cell control in telephone facilities.

As to claim 11, O'Neil teaches making a call to an external subscriber of the corresponding phone number by the wired and wireless interconnecting unit (col. 15, lines 37-53).

As to claim 12, Mukerjee teaches making a call to a subscriber within the mobile zone when the phone numbers not an external outgoing number (col. 6, lines 61-67).

As to claims 13, 17, and 20, Mukerjee teaches transferring the call to a mobile gateway (Fig. 2, 160) of the wired and wireless interconnecting unit through a private base station transceiver (pBTS) 162 and private base station controller (pBSC) 161 of

the wired and wireless interconnecting unit, the private base station transceiver constructing a wireless communication path with an arbitrary mobile communication terminal in a service area of the private base station (col. 3, line 59 through col. 4, line 7).

As to claims 14, 18, and 21, Mukerjee teaches changing by the wired and wireless interconnecting unit (Fig. 2, the unit including interface switch 161 and controller 165) being changing by the private base station controller (pBSC) 161 of the wired and wireless interconnecting unit.

As to claims 15, 19, and 22, Mukerjee teaches determining whether the phone number of the call is an external outgoing number being performed by the mobile gateway 165 (col. 6, lines 48-52).

As to claim 16, Mukerjee teaches transferring to a wired exchange of the wired and wireless interconnecting unit when the phone number is an external outgoing number (col. 5, lines 41-58).

10. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mukerjee.

Claim 37 is rejected for the same reasons as discussed above with respect to claim 23. Mukerjee does not teach fields that containing data in a data structure. It would have been obvious to one of ordinary skill in the art any data structure would have certain fields that contains certain data in each field and it is purely depend on how the system is designed

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 7,388,845. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the claims of the instant application and the U.S. Patent No. 7,388,845 present a method for interconnecting of system for interconnecting wired and wireless phone services.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh H. Nguyen whose telephone number is 571-272-7489. The examiner can normally be reached on Monday - Thursday from 6:30 A.M. to 5:00 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on 571-272-7488. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Quynh H Nguyen/
Primary Examiner, Art Unit 2614